

W.Benson
10/26/04

Serial No. 09/321,998, filed May 28, 1999, entitled AVOIDING N-SQUARED
 n 203 now Patent number 6,532,494,

HEARTBEAT MESSAGING PROBLEM IN AN OPERATING CLUSTER VIA CLOSED
 LOOP MESSAGING THEME, by Richard Frank, Michael Cusson, Joydip Kundu, and Daniel E.
 O'Shaughnessy, inventors;

Serial No. 09/322,472, filed May 28, 1999, entitled USING A CLUSTER-WIDE
 SHARED REPOSITORY TO PROVIDE THE LATEST CONSISTENT DEFINITION OF THE
 CLUSTER (AVOIDING THE PARTITION-IN-TIME PROBLEM), by Joydip Kundu, Richard
 Frank, Michael Cusson and Daniel E. O'Shaughnessy, inventors; and

Serial No. 09/321,967, filed May 28, 1999, entitled PROVIDING FIGURE OF MERIT
 VOTE FROM APPLICATION EXECUTING ON A PARTITIONED CLUSTER, by Richard
 Frank, Michael Cusson, Joydip Kundu, and Daniel E. O'Shaughnessy, inventors.

*Please replace the paragraph at page 10, lines 4 through 9 with the following
 paragraph:*

As described above in conjunction with FIG. 2, the cluster manager 32, in concert with
 2 the cluster managers residing on node_2 - node_4 14, 16, 18, manages cluster connectivity
 within the quorumless cluster 10. For the cluster managers to effectively cooperate in the
 connectivity management endeavor, a facility for sharing data is provided. The shareable storage
 device 22 of FIG. 1 houses a repository for this data sharing facility.

*Please replace the paragraphs in the Abstract, at page 21, lines 3 through 22 with the
 following paragraphs:*

3 A quorumless network cluster provides a highly available system by addressing the
 partition-in-space and partition-in-time problems in network clusters.

In a particular solution, a cluster manager (CM) can use disk based messaging to manage
 the operation of the cluster. Each node within the cluster must have access to a shared disk to
 operate within the cluster.

A particular methodology can operate the cluster in a closed loop between nodes 1 to N.
 If a node fails to receive a heartbeat message from its predecessor in the loop, it initiates a
 cluster reconfiguration by sending a reconfiguration message to each other node in the cluster.